



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

February 28, 1990

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

Mr. Michael Bouton  
Tracer Research Corporation  
3855 N. Business Center Drive  
Tucson, AZ 85705

Dear Mr. Bouton:

This is in response to your request for clarification of the federal regulations relating to leak detection for pressurized piping at underground storage tanks. You asked about how to convert a leak rate at one operating pressure to an equivalent leak rate at another operating pressure.

As stated in the preamble to the final regulations (53 FR 37167) "A manufacturer can test a device at any convenient operating pressure and mathematically convert the results to 10 psi to determine if the device meets the performance standard." This statement also applies to the requirement to detect a 0.1 gallon per hour leak at 1.5 times operating pressure (280.44(b)). EPA believes that the appropriate formula for the conversion is that the leak rate is proportional to the square root of the pressure drop ratio. Thus, a device that operates at operating pressure must be capable of detecting a leak rate of 0.08 gallons per hour to meet the performance standard of 280.44(b).

I hope this has answered your question regarding the regulations. If I may be of further assistance please contact me.

Sincerely,

/s/

Thomas Young  
Standards Branch  
Office of Underground Storage Tanks